

REMARKS

Claims 1-5 are pending in the application. With this amendment new claims 6 through 20 have been added to further define the invention. Support for the subject matter is found throughout the application as filed. No new matter has been added. Claims 2 and 3 have been amended in order to provide proper antecedent basis to the polybutadiene polyol claimed in independent claim 1.

The specification has been amended in order to refer to U.S. Patent 5,608,028. As the Examiner has made the Stanfleben reference, U.S. Patent No. 5,608,028, of record, no correction to the applicant's originally filed information disclosure is necessary.

The specification has also been amended to correct various informal errors.

Claims 1 and 4 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Song, U.S. Patent No. 5,567,761 in view of Harper, U.S. Patent No. 5,962,586. The Examiner states that Song teaches part A of independent claim 1 as Song discloses an aqueous two part isocyanate-free curable polyurethane resin system. The Examiner states that Song does not teach part B and thus utilizes the Harper reference to teach a polybutadiene-maleic anhydride adduct.

It is respectfully submitted that the cited references cannot teach or suggest the present invention as claimed. The Song reference cannot teach or suggest Applicant's claimed hydroxyl capped polyisocyanate. As described in the specification, the hydroxyl capped polyisocyanate is prepared by reacting an isocyanate compound with a stoichiometric excess of polyol, see paragraph [0029]. The reaction product results in a polyisocyanate having terminal and/or pendent hydroxyl groups (-OH), hence the claimed hydroxyl capped polyisocyanate. The Song reference teaches away from Applicant's claimed polyol capped polyisocyanate, in addition to lacking Applicant's claimed anhydride adduct of polybutadiene polyol as admitted by the Examiner.

As stated by the Examiner in paragraph 1 on page 3 of the Office Action, Song teaches a composition containing an acetoacetylated polymer (which cannot teach Applicant's claimed hydroxyl capped polyisocyanate) and a polyacrylate having at least

two(meth)acrylate end groups. Thus, the Song polyacrylate does not include any hydroxyl terminal or pendant groups. The Examiner cites Col. 12, lines 53-56 to teach Applicant's claimed polyol capped polyisocyanate. It is respectfully submitted that the reaction refined to by the Examiner cannot result in a polyol capped polyisocyanate. As stated in Col. 12, lines 39-59, an acrylic copolymer having pendant urethane side chains terminated with (meth)acrylate groups is formed. Lines 53-56 can only teach or suggest preparing an acrylated urethane having a single isocyanate terminal group which is prepared by capping a polyisocyanate with a monohydroxyl functional (meth)acrylate. As known in the art, the monohydroxyl group of the (meth)acrylate reacts with the polyisocyanate group to form a urethane linkage. Thus, the acrylated urethane has an isocyanate end group and an acrylate end group. Song teaches away from the polyol capped isocyanate of the present invention.

Likewise, the Harper reference cannot add any further teaching or suggestion that would render the present invention obvious. The Harper reference relates to a blend of epoxy resins which are cured with an anhydride hardener mixture. The Harper reference lacks Applicant's claimed hydroxyl capped polyisocyanate.

Claims 2 and 3 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Song in view of Harper, and further in view of Boeckeler, U.S. Patent No. 5,587,433 and Frisch et al., U.S. Patent No. 5,672,653. The Examiner states that Song and Harper do not teach the polybutadiene in the anhydride adduct to be a hydroxyl terminated polybutadiene having 1.9 to 2 hydroxyl groups per molecule and the claimed number average molecular weight.

It is respectfully submitted that the Boeckeler and Frisch references cannot add any further teaching or suggestion that would render the present invention obvious. The Boeckeler reference relates to a method for producing esters of hydroxyl terminated polybutadiene including the steps of reacting a hydroxyl terminated polybutadiene with an anhydride and subsequently reacting the derivative with an epoxide. Boeckeler lacks Applicant's claimed hydroxyl capped polyisocyanate and cannot teach or suggest Applicant's claim liquid potting composition.

The Frisch reference relates to an anionic waterborne polyurethane dispersion, see background of the invention Col. 1, lines 6-11. Frisch cannot teach or suggest

Applicant's claimed hydroxyl capped polyisocyanate or anhydride adduct of polybutadiene polyol. In Col. 1, lines 57-59 Frisch merely teaches a hydroxyl terminated polybutadiene. There is no suggestion for preparing Applicant's claimed anhydride of the polybutadiene polyol as claimed.

Claim 5 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Song in view of Sanftleben, U.S. Patent No. 5,608,028. The Examiner states that Song does not teach the polybutadiene polyol capped polyisocyanate but that Sanftleben supplies the missing limitation.


It is respectfully submitted that the Song and Sanftleben references cannot teach or suggest the present invention as claimed. As stated in the Background of the Invention of the present application, Sanftleben utilizes excess isocyanate which is undesirable in the present invention. Independent claim 5 claims that part A of the potting composition contains less than 1000 ppm of free isocyanate. Sanftleben, in Col. 5, lines 7-25 states that the isocyanate is utilized at a ratio that results in one hydroxyl group for every 1.15 ± 0.3 isocyanate groups. Sanftleben explicitly states that the resulting blend is isocyanate rich such as on the order of up to about 20 parts by weight isocyanate! Accordingly, Sanftleben teaches away from Applicant's claimed polybutadiene polyol capped polyisocyanate.

As further admitted in paragraph 1, the Examiner states that Song does not teach or suggest Applicant's part B which is an anhydride adduct of a polyol. Sanftleben also lacks the same.

It is respectfully submitted that the claims are in condition for allowance and a notice of such is earnestly solicited.

Respectfully submitted,

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